UNITED STATES DISTRICT COURT
DISTRICT OF NEW JERSEY

OANDA CORPORATION, Plaintiff, v. GAIN CAPITAL HOLDINGS, INC., and GAIN CAPITAL GROUP, LLC, Defendants.	Civil Action No. 20-05784-BRM-DEA Motion Date: August 16, 2021 Oral Argument Requested *Document Filed Electronically*

DEFENDANTS' BRIEF IN SUPPORT OF MOTION FOR JUDGMENT ON THE PLEADINGS PURSUANT TO RULE 12(c)

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Defendants GAIN Capital Holdings, Inc. and GAIN Capital Group, LLC (collectively, "GAIN") respectfully submit this brief in support of their motion for judgment on the pleadings of all Counts in the First Amended Complaint for Patent Infringement (D.I. 59, "FAC") filed by Plaintiff OANDA Corporation ("OANDA") under Fed. R. Civ. P. 12(c).

I. INTRODUCTION

The Court should dismiss OANDA's FAC because it fails to meet the stringent standards of 35 U.S.C. § 101 and the United States Supreme Court's controlling decision in *Alice Corp. Pty. Ltd. v. CLS Bank Int'l*, 573 U.S. 208, 218 (2014). *See* III.B *infra*. *Alice* and many other federal decisions have invalidated patent claims directed to abstract ideas where the claims "merely require generic computer implementation" and thus "fail to transform that abstract idea into a patent-eligible invention," *Alice*, 573 U.S. at 221; like the claims in this case should be.

In the FAC, OANDA asserts two patents with claims directed to abstract ideas within the field of trading currency over a computer network: U.S. Patent Nos. 8,392,311 ("'311 Patent") and 7,146,336 ("'336 Patent") (collectively, the "Asserted Patents"). *See* D.I. 59, 59-1, 59-2. The '311 Patent contains only "method claims"[1] directed to automatically executing currency trades over a computer network based on user-defined parameters, such as a price specified by a user, while the '336 patent contains "system claims"[2] directed to online currency trading systems that 1) automatically execute trades based on user- and system-determined parameters, such as a stop-loss order, take-profit order, or alternatively, a margin requirement; 2) calculate, pay out, and collect interest on a tick-by-tick basis; 3) compute currency exchange rates based on

[1] A method or process claim is a claim that "cover[s] an act or series of acts." *In re Nuijten*, 500 F.3d 1346, 1355 (Fed. Cir. 2007).

[2] A system claim is a claim where the "claim limitations include elements rather than method steps." *Arris Grp., Inc. v. British Telecomm. PLC*, 639 F.3d 1368, 1376 n. 8 (Fed. Cir. 2011).

positions held by the system; or 4) calculate various values related to hedging.[3]

Such claims, however, are not subject to patent protection where, as here, they do not improve upon computer technology and do not transform the claim so that it "'amounts to significantly more than a patent upon the [ineligible concept] itself.'" *See Alice*, 573 U.S. at 218 (quoting *Mayo Collaborative Servs. v. Prometheus Labs., Inc.*, 566 U.S. 66, 73 (2012)). At most, the claims recite generic well-known computer components and known technologies for communicating information between those technical components. But that too is insufficient.

Accordingly, under the controlling and well-established law, the Asserted Patents are invalid under 35 U.S.C. § 101, and judgment on the pleadings is appropriate under Fed. R. Civ. P. 12(c). Moreover, because these deficiencies are rooted in the claims' failure to cover patentable subject matter, and thus cannot be cured by further amendments to the complaint, OANDA's FAC should be dismissed with prejudice.

II. THE ASSERTED PATENTS

Both Asserted Patents are titled "Currency Trading System, Methods, and Software" and state that the "present invention . . . is related to trading currency over a computer network." '336 patent at 1:13-15.[4] The specification acknowledges that electronic currency trading is well-known. *See* '336 patent at 1:19-28 (describing the three-way handshake "[i]n a traditional on-line currency market"). Because currency trading is an economic practice, online currency trading, as described in the specification and the claims, is a well-known economic practice.

A. The '311 Patent Claims

Claims 1 and 7 are the only independent claims of the '311 patent. Claim 1 recites:

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[3] The Asserted Patents do not define stop-loss order, take-profit order, margin requirement, or hedging, which indicates that each is a term of art well-known in the online trading industry.

[4] The '311 patent is a continuation of the '336 patent (*see* '311 Patent at 1:7-11); and thus, the Asserted Patents share the same specification and claim to priority. As such, citations are to the '336 patent unless noted otherwise.

> 1. A method of trading currencies over a computer network connecting a trading system server and at least one trading client system, comprising the steps of:
>
> (i) at the trading system server, determining and dynamically maintaining a plurality of current exchange rates, each current exchange rate relating to a pair of currencies and including a first price to buy a first currency of the pair with respect to a second currency of the pair and a second price to sell the first currency of the pair with respect to the second currency of the pair;
>
> (ii) transmitting data from the trading system server to a trading client system, the transmitted data representing at least one current exchange rate at the time of the transmission;
>
> (iii) at the trading client system, displaying the first and second prices for each received current exchange rate to a user;
>
> (iv) at the trading client system, accepting input from the user identifying a pair of currencies the user desires to trade, an amount of at least one currency of the pair desired to be traded and a requested trade price at which it is desired to effect the trade;
>
> (v) transmitting the accepted input from the trading client system to the trading system server;
>
> (vi) at the trading system server, comparing the requested trade price to the respective first price or second price of the corresponding current exchange rate at that time and, if the respective first price or second price of the corresponding current exchange rate at that time is equal to or better than the requested trade price, effecting the trade at the corresponding respective current exchange rate first price or second price and if the corresponding current exchange rate is worse than the requested trade price, refusing the trade; and
>
> (vii) transmitting from the trading system server to the trading client system an indication of whether the trade was refused or transacted and, if transacted, an indication of the price the trade was transacted at.

Claim 7 has steps (i), (ii), (iv),[5] (vi) and (vii) in common with Claim 1 but does not recite steps (iii) and (v). Claims 2–6 depend directly or through multiple dependencies from claim 1,

[5] For step (iv), rather than "at the trading client system, accepting input the user identifying a pair of currencies the user desires to trade," Claim 7 recites "receiving at the trading system server input from a user of the trading client system identifying a pair of currencies the user desires to trade." Thus, it merely describes receiving user inputs.

and add limitations related to deriving the requested trade price (claims 2 and 6) or related to the input from the user regarding the currencies (claims 3-5). Viewed as a whole, these claims are all directed to automated online currency trading based on user-defined parameters, such as a user-specified price.

As evident from the plain language, all claims of the '311 Patent recite a method of trading without citing any specialized technical components or features. The only possible technical components are the computer network, the trading client system, and the trading system server. However, the specification describes none of these as novel or specialized but instead acknowledges that each is comprised of known computer components.

B. The '336 Patent Claims

Each of independent claims 1, 2, 3, 4, 5, 7, and 11 of the '336 Patent recites: A system for trading currencies over a computer network, comprising: (a) a server front-end in communication with said computer network; (b) a database; (c) a transaction server in communication with said server front-end and with said database; (d) a rate server in communication with said server front-end; and (e) a pricing engine in communication with said rate server. (Claims 1, 2, 3, 4, 5, 7, and 11). These "base elements" are common across all claims of the '336 patent.

Rather than reciting any novel or specialized computer features, the specification acknowledges that each of these base elements are standard, non-specialized computer components. For the server front-end and the database, the specification describes them as nothing more than generic computer and network components. '336 Patent at 7:3-8 (noting that the server front end "encapsulates ***a standard*** Web server (a la Apache)") (emphasis added); *id.* at 6:24-34 ("The database is preferably a ***standard commercially available*** SQL database….") (emphasis added). For the remaining three elements—the transaction server, the rate server, and the pricing engine—the specification does not describe them as a new or specialized computer component but instead as one component of the Trading System server that "preferably runs exclusively on Unix platforms," a brand-name computer platform. *See id.* at 6:20-23. Moreover,

the specification describes each in terms of the functionality that one would expect from its name without any description of how these functions should be implemented. The transaction server is described as "encapsulat[ing] all transaction functionality," "communicating the transactions to the [d]atabase . . . server . . . after validating the transactions," "updat[ing] all other modules that need to be informed of new transactions," and "inform[ing] the currently online traders when a transaction . . . takes place." *Id.* at 7:41-51. The rate server is described as "obtain[ing] currency exchange rate information from a variety of external rate sources and stor[ing] it locally," "serv[ing] requests [for historical rate data]," and "cach[ing] in memory all of the frequently and recently requested rates." *Id.* at 7:14-36. And, the pricing engine is described as "comput[ing] the currency exchange rates that the traders see and that are used for trading." *Id.* at 7:16-22. Thus, each of the "base elements" are no more than general purpose computer components.

In addition to the "base elements," each claim recites an additional element. For example, claim 1 adds an "interest rate manager in communication with said transaction server and said database, wherein said interest rate manager is operative to calculate, pay out, and collect interest on a tick-by-tick basis." Claim 2 adds "a trade manager in communication with said transaction server and said database," that "comprises a stop-loss daemon that (a) continuously checks whether stop-loss orders should be executed, and (b) if a stop-loss order should be executed, executes it through said transaction server."[6] Claim 5 specifies that the pricing engine is "operable to compute currency exchange rates based on: (a) data obtained from external rate sources; and (b) market directional movement and volatility."[7] Claim 7 adds "a

[6] Claim 3 is identical to claim 2 except it recites a "take-profit daemon" that checks and executes "take-profit order[s]" instead of a stop-loss daemon and orders. Likewise, claim 4 is identical to claim 2 except it recites a "limit-order daemon" that checks and executes "limit orders" instead of a stop-loss daemon and orders.

[7] Claim 6, which depends from claim 5, further specifies that the pricing engine "compute[s] currency exchange rates based on positions held by said system." Claim 8, which depends from claim 6, further specifies that the positions are "managed based on one or more trading models." Claim 9, which depends from claim 8, further recites that the one or more trading models comprise "(a) a price collector component; (b) a price filter component; (c) a price database component; (d) a gearing calculator component; (e) a deal acceptor component; and (f) a book-

hedging engine in communication with said transaction server, wherein said hedging engine is operable to perform at least two of the following calculations: (a) calculate a total amount of home currency appearing in all open positions; (b) calculate an out-of-equilibrium exposure; (c) calculate a new potential net exposure; (d) calculate an equilibrium position; (e) calculate boundaries of possible exposures; (f) calculate values for a pair of quoting functions; and (g) calculate an average price and an average spread." Claim 11 adds "a margin control manager in communication with said transaction server and said database, wherein said margin control manager is operable to monitor on a tick-by-tick basis margin requirements of accounts and on said tick-by-tick basis liquidate holdings as needed to maintain specified margins." Viewed as a whole, the claims of the '336 patent are thus directed to online currency trading systems that 1) automate trades based on user- and system-determined parameters, such as a stop-loss order, take-profit order, limit order, or trading model, or alternatively, a margin requirement; 2) calculate, pay out, and collect interest on a tick-by-tick basis; 3) compute currency exchange rates based on positions held by the system; or 4) calculate various values related to hedging.

Like with the "base elements," none of these additional elements constitute new or specialized computer components. Indeed, the specification either acknowledges that the recited functionality of each of these additional elements is well-known or merely describes the function itself, failing to recite any specialized computer for performing the functionality. Specifically, the specification acknowledges that the functions in claims 1, 5, 6, and 7 can all be done using known formulas or methods. '336 Patent at 7:52-8:40 (acknowledging that calculating the interest rates recited in claim 1 "on a tick-by-tick basis" merely involves a routine application of a well-known interest formula); *id.* at 7:24-25 (acknowledging that "[v]arious methods of calculating such [interest] rates [as recited in claims 5 and 6] are known to those skilled in the

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keeper component." Claim 10 is identical to claim 9 except that it also includes an "opportunity catcher component."

art."); *id.* at 9:24-26 (noting that that "[v]arious methods of performing such [hedging] calculations [as recited in claim 7] are known to those skilled in the art."). With respect to claims 8-10, the '174 Provisional Application[8] acknowledges computing currency exchange rates using positions based on one or more trading models is not new. D.I. 59-3 at 333 (noting the application of evolutionary algorithms to exchange rates) (citing to Oussaidène, et al. (1997)). Indeed, the '174 Provisional Application discusses numerous trading models from the previous decade. *Id.* at 316-318.

For claims 2-4 and 11, the specification only describes the additional elements by their functionality. With respect to claims 2-4, the specification describes the "trade manager" based on its "subcomponents: (a) a stop-loss daemon . . .; (b) a take-profit daemon . . .; and (c) a limit-order daemon . . ." *See* '336 Patent at 8:41-53. The specification then describes each daemon by its functionality. *Id.* at 8:54-61 (describing the daemons as "continuously monitor[ing] the current rates to determine whether action is required," "cach[ing] in memory all of the orders that it may need to execute," and "keep[ing] the orders suitably sorted so that they can take fast action when necessary"). With respect to claim 11, the specification describes the "margin control manager" in terms of functionality that one would expect from its name: "continuously monitor[ing] the margin requirements of all trader accounts," "[w]hen necessary . . . liquidat[ing] some (or all) of a trader's holdings," and "cach[ing] in memory all of the information necessary for this computation." *Id.* at 8:62-9:2. The "trade manager" and "margin control manager" are thus additional generic, functionally defined computer modules.[9]

In sum, the specification does not describe any of the recited components of the online

[8] "'174 Provisional Application" is Provisional Application No. 60/271174.

[9] Moreover, as components of the Trading System server, the trade manager and the margin control manager also "preferably run[] exclusively on Unix platforms." *See id.* at 6:20-23. Thus, there is no new computer component described or claimed.

currency trading systems claimed in the '336 patent as specialized components or even a new computer component.

C. The Prosecution Histories Confirm That the Asserted Patent Claims Are Invalid Under §101

The Supreme Court's decision in *Alice* and its progeny reject the very basis that applicants argued made its claims allowable and patentable under §101, but *Alice* had not issued when the applications that matured into the Asserted Patents were being examined by the Patent Office.

Claims 1-11 of the '336 patent issued in 2006 long before *Alice*. Original claims 4 and 6-8 (claims 1-4 of the issued patent) were rejected as unpatentable under §101 based on then-existing law. Ex.[10] 1, at 3/24/2004 Office Action, pp. 3-5. The examiner stated that the terms "manager", "server", "engine", and "network" were method limitations and that, without other structural terms, the system claims were being treated as method claims that lacked a "technological basis in the body of the claim." *Id.* at pp. 4-5. "[T]he claim may be interpreted in an alternative as involving no more than a manipulation of an abstract idea and therefore non-statutory under 35 U.S.C. §101. In contrast, a method claim that includes in the body of the claim at least one structural/functional interrelationship which can only be computer implemented (and non-trivial) is considered to have a technological basis." *Id.* at p. 4. In response, the applicants amended the independent claim to recite that the server front-end was "in communication with said computer network" and that the transaction server, rate server, and pricing engine were in communication with certain other claim elements. *Id.* at 8/24/04 Response, p. 2 (claim 1). The examiner then withdrew the §101 rejections in the following action. *Id.* at 11/16/2004 Office Action. Since then, the Federal Circuit has repeatedly confirmed that ***adding computer limitations does not establish patentability*** even if such limitations required use of concrete, tangible components. *Affinity Labs of Tex., LLC v. DIRECTV, LLC*, 838 F.3d 1253, 1260 (Fed. Cir. 2016); *Bancorp Servs., LLC v. Sun Life*

[10] "Ex." refers to exhibits attached to the Declaration of Aden M. Allen, filed herewith.

Assurance Co. of Can., 687 F.3d 1266, 1278 (Fed. Cir. 2012) ("As we have explained, '[s]imply adding a "computer aided" limitation to a claim covering an abstract concept, without more, is insufficient to render the claim patent eligible.'") (citation omitted).

Similarly, claims 1-7 of the '311 patent issued before *Alice*. Original claims 13-16, which were later cancelled during prosecution, were rejected under §101. Ex. 2, at 3/31/2010 Office Action, pp. 3-4. Referencing the then-applicable "machine-or-transformation test," the applicants amended those claims to recite that "receiving" and "calculating" steps were performed "at a trading system server" (*id.* at 8/31/2010 Amendment, pp. 7-8), and argued in the accompanying remarks:

> Claims 13 and 15 have been amended to specify that the steps of receiving and calculating are performed at a trading system server. With these amendments the methods recited in claims 13-16 are limited to methods performed on apparatus. Accordingly, claims 13- 16 are believed to be patentable subject matter.

Id. at p. 7. These additions to the claims overcame the §101 rejection. In the same response, the applicants added the claims that ultimately issued, which included similar computer-like elements to those added to claims 13-16. However, as stated above, the Federal Circuit has repeatedly confirmed that ***adding computer limitations do not establish patentability*** even if such limitations required use of concrete, tangible components. *See, e.g., Affinity Labs*, 838 F.3d at 1260. Thus, for both patents, the way the applicants overcame each §101 rejection has since been rejected by the Supreme Court and Federal Circuit – repeatedly.

D. PTAB's CBM Decisions Confirm That the Asserted Patents Fail to Claim Technological Inventions under §101

GAIN filed covered business method ("CBM") petitions asserting that each of the Asserted Patents is invalid under §101. *See* Exs. 3-4. While the PTAB denied these petitions, it did not do so on the merits. *Achates Reference Publ'g, Inc. v. Apple Inc.*, 803 F.3d 652, 654 (Fed. Cir. 2015) (stating that "CBMR proceedings on the merits" only begin after the CBM is instituted), *overruled on other grounds by Wi-Fi One, LLC v. Broadcom Corp.*, 878 F.3d 1364, 1367 (Fed. Cir. 2018). Rather, it denied institution on a preliminary ground – the framing of the

issue: the PTAB found that the petitioner's alleged abstract idea of "currency trading" was too broad; and because it was the petitioner's "burden" to frame the abstract idea, the PTAB declined to recast the description of the abstract idea and denied institution of the petitions. Ex. 5 at 31-32 (citing 35 U.S.C. § 324(a); *SAS Inst., Inc. v. Iancu*, 138 S.Ct. 1348, 1356-57 (2018)); Ex. 6 at 27 (same). Because the PTAB's decisions denying institution were preliminary and prevented review of the CBM petitions from proceeding to the trial stage, no estoppel applies to them. *Credit Acceptance Corp. v. Westlake Servs.*, 859 F.3d 1044, 1049 (Fed. Cir. 2017) ("Once the Board issues a final written decision, the estoppel statute applies.").

Importantly, in its decision, the PTAB rejected OANDA's arguments that the patents were not subject to CBM review because they were allegedly technological inventions. As it "consider[ed] 'whether the claimed subject matter as a whole recite[d] a technological feature that [was] novel and unobvious over the prior art,'" Ex. 5 at 13-14 (citing 37 C.F.R. § 42.301(b)), the PTAB applied the following standard:

> "A claim does not include a 'technological feature' if its 'elements are nothing more than general computer system components used to carry out the claimed process.' *Blue Calypso, LLC v. Groupon, Inc.*, 815 F.3d 1331, 1341 (Fed. Cir. 2016); *see also Versata Dev. Grp., Inc. v. SAP Am., Inc.*, 793 F.3d 1306, 1327 (Fed. Cir. 2015) ('the presence of a general purpose computer to facilitate operations through uninventive steps does not change the fundamental character of an invention')."

Ex. 5 at 13-14; Ex. 6 at 11.

For the '311 patent, the PTAB "agree[d] with Petitioner that the claim recites well-known computer components and known technologies for communicating information between those components, which indicates that the '311 patent is not a patent for a technological invention." Ex. 5 at 15. The PTAB first rejected OANDA's argument that the different kind of trading order, "Market Order with Requested Price" (MORP) was a technological feature. *Id.* at 16 ("Even assuming that the type of trading order described by Patent Owner is novel and unobvious over the prior art, however, we do not see why it would constitute a 'technological feature,' and Patent Owner has pointed us to no novel technical components in the claim

constituting an unobvious system architecture that would carry out such a trading order."). The PTAB also found that "Claim 1 recites a method, not a 'system architecture' as Patent Owner contends. … And the only technical components in the claim are the generically recited 'trading system server' and 'trading client system.'" *Id.* The PTAB further noted that claim 1 does not recite a "technological feature" that is novel and unobvious over the prior art because the claim only recites "two technical components, namely a 'trading system server' and 'trading client system,' which communicate over a 'computer network'" and these "components are recited in generic terms, and servers and client systems were plainly known in the prior art." *Id.* at 16-17.

For the '336 patent, the PTAB determined that "claim 5 does not recite a technological feature that is novel and unobvious over the prior art." Ex. 6 at 14. The PTAB noted and rejected OANDA's argument "that when the common elements of the independent claims are viewed in combination, 'the steps reveal that [Patent Owner] is claiming an improved currency trading system, comprising a specific hardware configuration and software architecture, which provides real-time trading models that were not available in prior art systems,'" finding that the "Patent Owner's arguments [were] not commensurate with the scope of the claims." *Id.* at 13-14 (citation omitted). Specifically, the PTAB stated that "claim 5 does not recite 'real-time' trading. Nor does claim 5 recite any of the capabilities of the 'server front-end,' the 'rate server,' or the 'pricing engine' Patent Owner argues makes these claim elements nonobvious." *Id.*

Thus, despite declining to institute the CBMs, the PTAB provided guidance as to whether the Asserted Patents' claims recite a technological feature: the PTAB answered that they do not.

III. LEGAL STANDARD

A. GAIN's Challenge to the Claims under 35 U.S.C. §101 May Be Properly Decided on a Motion for Judgment on the Pleadings

Section 101 patent-eligibility is a "threshold test" that ensures that the patent claims do not capture subject matter that "are part of the storehouse of knowledge of all men . . . free to all men and reserved exclusively to none." *Bilski v. Kappos*, 561 U.S. 593, 601-02 (2009) ("*Bilski II*") (citation omitted). Indeed, §101 questions should be resolved as early as practicable in a

case. *IpLearn-Focus, LLC v. Microsoft Corp.*, No. 14-CV-00151-JD, 2015 U.S. Dist. LEXIS 90077, at *8 (N.D. Cal. July 10, 2015) (citing *I/P Engine, Inc. v. AOL Inc.*, 576 F. App'x 982 , 996 (Fed. Cir. 2014) (Mayer, J., concurring) ("Patent eligibility issues can often be resolved without lengthy claim construction, and an early determination that the subject matter of asserted claims is patent ineligible can spare both litigants and courts years of needless litigation.").

Moreover, the question of patent eligibility "[l]ike other legal questions based on underlying facts, . . . may be, and frequently has been, resolved on a Rule 12(b)(6) or (c) motion where the undisputed facts, considered under the standards required by that Rule, require a holding of ineligibility under the substantive standards of law." *SAP Am., Inc. v. InvestPic, LLC*, 898 F.3d 1161, 1166 (Fed. Cir. 2018) (affirming a motion for judgment on the pleadings that patents were invalid under 35 U.S.C. § 101). Furthermore, "claim construction is not an inviolable prerequisite to validity determinations under § 101." *Genetic Techs. Ltd. v. Merial LLC*, 818 F.3d 1369, 1374 (Fed. Cir. 2016) (citation omitted)).

Accordingly, the Court can and should resolve this Rule 12(c) motion.

B. Abstract Ideas Are Ineligible for Patent Protection

Under §101, "[l]aws of nature, physical phenomena, and abstract ideas" are not patent eligible. *Alice*, 573 U.S. at 216. The Supreme Court has set forth a two-part test to determine if a patent claim is invalid for claiming an abstract idea. At the first step, the court determines whether the claim is directed to an abstract idea or other patent-ineligible concept (*id.* at 217; *Mayo*, 566 U.S. at 76-78), which "involves examining the patent claims in view of the plain claim language, statements in the written description, and the prosecution history, if relevant." *CardioNet, LLC v. InfoBionic, Inc.*, 955 F.3d 1358, 1374 (Fed. Cir. 2020). This step "look[s] at the focus of the claims, their character as a whole," to determine whether they are abstract. *Elec. Power Grp., LLC v. Alstrom S.A.*, 830 F.3d 1350, 1353 (Fed. Cir. 2016) (internal quotations

omitted). Only if the claims recite specific steps that "improve[] the relevant technology"—as opposed to conventional business practices carried out using "generic processes and machinery"—will they escape treatment as abstract. *McRO, Inc. v. Bandai Namco Games Am. Inc.*, 837 F.3d 1299, 1314 (Fed. Cir. 2016). Claims directed to "improving a user's experience while using a computer application [are] not, without more, sufficient to render the claims directed to an improvement in computer functionality." *Customedia Techs., LLC v. Dish Network Corp.*, 951 F.3d 1359, 1365 (Fed. Cir. 2020).

If the claims are directed to an abstract idea, the court at the second step evaluates whether there is "an 'inventive concept'—*i.e.*, an element or combination of elements that is sufficient to ensure that the patent in practice amounts to significantly more than a patent upon the ineligible concept itself." *Alice*, 573 U.S. at 217-18 (internal quotations and alterations omitted, citation omitted); *Mayo*, 566 U.S. at 72-73. The court need not, however, accept legal conclusions or conclusory allegations of inventiveness as true. *See Blackberry Ltd. v. Twitter, Inc.*, No. 19-1444-GW-KSx, 2019 U.S. Dist. LEXIS 206740, at *19-21 (C.D. Cal. Oct. 1, 2019) (rejecting conclusory assertions that certain claim limitations were not routine, conventional, or well-understood); *see also Dropbox, Inc. v. Synchronoss Techs., Inc.*, 815 Fed. App'x 529, 538 (Fed. Cir. 2020) (same). Absent an inventive concept, a claim containing an abstract idea is invalid as unpatentable subject matter.

Moreover, the inventive concept "cannot simply be an instruction to implement or apply the abstract idea on a computer." *Univ. of Fla. Research Found., Inc. v. Gen. Elec. Co.*, 916 F.3d 1363, 1369 (Fed. Cir. 2019) (quotation and citation omitted). Indeed, "the mere recitation of a generic computer cannot transform a patent-ineligible abstract idea into a patent-eligible invention." *Content Extraction & Transmission LLC v. Wells Fargo Bank, N.A.*, 776 F.3d 1343,

1348 (Fed. Cir. 2014) (citations omitted). For the role of a computer in a computer-implemented invention to be deemed meaningful in the context of transforming an abstract idea into an "inventive concept," "it must involve more than performance of well-understood, routine, and conventional activities previously known to the industry." *Id.*, 1347-48 (internal quotations omitted, citation omitted). For example, "invocation of already-available computers that are not themselves plausibly asserted to be an advance, for use in carrying out improved mathematical calculations, amounts to a recitation of what is 'well-understood, routine, [and] conventional.'" *SAP Am.*, 898 F.3d at 1170 (quoting *Mayo*, 566 U.S. at 73). Furthermore, Federal Circuit "precedent is clear that merely adding computer functionality to increase the speed or efficiency of the process does not confer patent eligibility on an otherwise abstract idea." *Intellectual Ventures I LLC v. Capital One Bank (USA)*, 792 F.3d 1363, 1370 (Fed. Cir. 2015).

IV. ARGUMENT

A. All Claims of the Asserted Patents Are Drawn to an Abstract Idea

The claims of the Asserted Patents are directed to abstract ideas, which at their core are related to online currency trading, which is a well-known economic practice. *See supra* § II (citing '336 patent at 1:19-28 (describing the three-way handshake "[i]n a traditional on-line currency market")).

1. The '311 Patent Claims Are Drawn to Abstract Idea

Each of the '311 patent claims are directed to the abstract idea of automated currency trading over a computer network based on user-defined parameters, such as a user-specified price. Specifically, claims 1 and 7 of the '311 patent are directed to the abstract idea of transacting an online currency trade if a first or second current exchange rate price is better than or equal to a user's requested trade price and refusing a trade if it is not. '311 patent at Claims 1 and 7. The only difference between the two claims is that claim 1 adds elements related to

entering the order from the client's perspective.

While claims 2-6, which depend directly or indirectly on claim 1, add small tweaks to the method recited in claim 1, they too are directed to the same abstract idea: automated currency trading over a computer network based on user-defined parameters, such as a user-specified price. Claim 2 recites deriving the user-specified parameters based on the user's inputs. *Id.* at Claim 2. Claims 3 and 4 recite additional ways for the user to input parameters, which are then used to derive the user-specified parameter (i.e. user-specified price). *Id.* at Claims 3 and 4. Claim 5 recites the input fields introduced in claim 4 in terms that mirror the standard user input from claim 3 and derives the user-specified price from that input. *Id.* at Claim 5. Claim 6 describes the situation where the user requests a trade at the current market price. *Id.* at Claim 6. In sum, none of the dependent claims deviate from the abstract idea of claims 1 and 7. Thus, what all these claims have in common is that each is claiming the abstract idea of implementing on general purpose computer components a simple decision tree for whether to place a trade or not based on market data and user inputs.

Federal Circuit precedent establishes that executing a financial trade based on user input is an abstract idea. In *Trading Technologies International, Inc. v. IBG LLC*, the Federal Circuit affirmed that a method for displaying transactional information and facilitating trading in a system where orders comprise a bid type or an offer type was patent-ineligible. 921 F.3d 1084, 1088-89, 1093-94 (Fed. Cir. 2019) (discussing the '056 patent). There, the method comprised receiving bid and offer information for a product from an electronic exchange, displaying the bid and offer indicators, receiving user input indicating quantity for each of a plurality of orders to be placed at one or more price levels, and sending the order for the default quantity at the desired price to the electronic exchange. *Id.* The main difference between this method claim and the

claims before the court is that the '311 patent's claims also include a decision tree to determine whether the currency trade should be executed.

But the use of a decision tree to decide whether to execute a transaction is also an abstract idea. For example, in *Bozeman Financial LLC v. Federal Reserve Bank of Atlanta*, the Federal Circuit affirmed as patent-ineligible a computer implemented method claim for detecting fraud in financial transactions comprising receiving and storing two financial records where each record included more than one parameter, determining whether there was a match between at least two parameters of the two financial records, and, if the parameters matched, sending notification to a payee bank with authorization to process an electronic financial transaction, or if the parameters did not match, sending notification to a payee bank to not process the financial transaction. 955 F.3d 971, 978 (Fed. Cir. 2020) ("Verifying financial documents to reduce transactional fraud is a fundamental business practice that, without more, is not eligible for patent protection."). Importantly, *Bozeman* is not the only Federal Circuit decision that has held claims that implement a decision tree are abstract. *See LendingTree, LLC v. Zillow, Inc.*, 656 F. App'x 991, 995 (Fed. Cir. 2016) (finding abstract a system claim for coordinating business between a computer user and a plurality of lending institutions in which the system employed selection criteria to filter credit data received from the user and automatically select one or more lending institutions from the plurality of lending institutions, and then forwarded the credit data to the selected lending institutions); *Boom! Payments, Inc. v. Stripe, Inc.*, 839 F. App'x 528, 532-33 (Fed. Cir. 2021) (finding abstract a payment processor system claim that charged a buyer's account after comparing and determining that received buyer-specific information corresponded with received seller-specific information).

2. The '336 Patent Claims Are Drawn to Abstract Ideas

The claims of the '336 Patent are directed to several abstract ideas regarding online

currency trading systems. Claim 1 is directed to an online currency trading system that calculates, pays out, and collects interest on a tick-by-tick basis. '336 patent at Claim 1. Claims 2-4, and 11 are directed to online currency trading systems that automate trades based on user- and system-determined parameters, such as a stop-loss order (claim 2), take-profit order (claim 3), limit order (claim 4), or alternatively, a margin requirement (claim 11). *Id.* at Claims 2, 3, 4, and 11. Claims 5, 6, and 8-10 are directed to online currency trading systems that compute currency exchange rates based on external rate sources and directional movement and volatility (claim 5) and positions held by the system (claim 6), where the positions are based on one or more trading models (claims 8-10). *Id.* at Claims 5, 6, 8-10. And claim 7 is directed to an online currency trading system that calculates various values related to hedging. *Id.* at Claim 7. Thus, each of these claims are claiming an abstract idea: (a) general purpose computer components making certain calculations and taking predefined trading actions based on those calculations, (b) general purpose computer components taking predefined trading actions based on user- or system- determined parameters, or (c) general purpose computer components making certain predefined calculations based on market and/or other inputs.

Federal Circuit and Supreme Court precedent support finding that such concepts are abstract. For instance, in *Fast 101 Pty Ltd. v. Citigroup Inc.*, the Federal Circuit affirmed that a claim directed to intermediate settlement that employs a discount for early payment (i.e. incentive amount) was an abstract idea. 834 F. App'x 591, 593-94 (Fed. Cir. 2020) ("We agree with the district court's further finding that this incentive amount, or discount, describes nothing more than the abstract idea of calculating an amount based on fiscal attributes, just as we concluded in *Mortgage Grader, Inc. v. First Choice Loan Services Inc.*, 811 F.3d 1314, 1324 (Fed. Cir. 2016) (determining that generating a discounted loan price is an abstract idea).").

Calculating and providing a discount is similar to making calculations and taking predefined trading actions based on those calculations, such as calculating and paying interest; and thus, the court should find the latter is also an abstract idea. The same reasoning applies to making certain predefined calculations based on market and/or other inputs, such as calculating various values related to hedging, which "is a fundamental economic practice long prevalent in our system of commerce." *Bilski II*, 561 U.S. at 611. Further, similar to the discussion above with respect to the '311 patent, a general purpose computer components that takes predefined trading actions based on user- or system- determined parameters, such as executing trades based on user input, with or without using a decision tree, is an abstract idea. *See supra* § IV.A.1 (discussing *Trading Technologies* and *Bozeman*).

3. The Claims of the Asserted Patents Do Not Improve the Operation of a Computer or Solve a Problem Unique to Computers or the Internet

While the claims of the '311 and '336 patents incorporate generic computer components and functionality, such limitations amount to nothing more than an instruction to perform the abstract idea on a computer. An abstract financial process performed with "basic computer equipment" is still abstract. *Bozeman*, 955 F.3d at 978-79; *see also Bancorp Servs.*, 687 F.3d at 1280; *CyberSource Corp. v. Retail Decisions, Inc.*, 654 F.3d 1366, 1374-75 (Fed. Cir. 2011). As the Federal Circuit explained in *Bozeman*, "the use of well-known computer components to collect, analyze, and present data…does not render…claims any less abstract." 955 F.3d at 979.

Like the claims in *Bozeman*, the claims of the Asserted Patents merely use generic computers to perform vague functions related to currency trading. The claims of the '311 patent use generic computer components—a "trading system server" and a "trading client system"—that perform basic computer functions—collecting, storing, comparing, and communicating data—to perform a currency trade over a computer network. This process is also described at an

extremely high level of generality, offering no implementation details describing how the generic computer components implement the abstract idea beyond the use of conventional computer functionality. Likewise, the claims of the '336 patent use generic computer components—"a server front-end in communication with said computer network," a "database," and various generic modules that communicate with these components—that perform basic computer functions such as communicating, storing, receiving, analyzing and calculating data to perform an online currency trade. The various modules are defined in terms of their functions and more specifically their functions in currency trading, where the functions themselves are described at an extremely high level of generality. Furthermore, as discussed *supra* § II.B, where the specification actually provides a description of claimed components, the specification acknowledges that such elements are standard computer components.

These claims also differ from those at issue in *DDR Holdings, LLC v. Hotels.com, L.P.* because they are not "rooted in computer technology in order to overcome a problem specifically arising in the realm of computer networks." 773 F.3d 1245, 1257 (Fed. Cir. 2014). Instead, they use generic computers to perform the abstract currency trading functions that the claims are directed to. Indeed, upon close examination, none of the claims recite technical features that overcome the alleged deficiencies of the prior art (e.g. "Internet delays" or "corporate firewalls"). *Cf.* Ex. 6 at 13 (finding that the "Patent Owner's arguments [were] not commensurate with the scope of the claims"); Ex. 5 at 16 (rejecting OANDA's argument that the different kind of trading order, "Market Order with Requested Price" (MORP), was a technological feature); *id.* at 15 ("agree[ing] with Petitioner that the claim recites well-known computer components and known technologies for communicating information between those components, which indicates that the '311 patent is not a patent for a technological invention.").

Accordingly, all claims of the Asserted Patents are directed to abstract ideas.

B. None of the Claims of the Asserted Patents Contain an Inventive Concept Sufficient to Transform the Abstract Idea into Patentable Subject Matter

Under the second *Alice* step, to survive a challenge under 35 U.S.C. § 101, the Asserted Patents must contain an "inventive concept sufficient to transform the claimed abstract idea into patent-eligible application." *RecogniCorp, LLC v. Nintendo Co.*, 855 F.3d 1322, 1325 (Fed. Cir. 2017) (internal quotations omitted, citations omitted). None of the claims do so.

1. None of the Claims of the '311 Patent Provide an Inventive Concept

a. Independent Claim 1

Claim 1 of the '311 Patent recites a method that uses generic computer components to perform the abstract ideas over a computer network. Indeed, the claimed method, as a whole, as well as each limitation individually, merely describes the abstract idea and does not rely on any specialized computer functionality. Thus, as in *Alice*, "the function performed by the computer at each step is purely conventional." *Alice*, 573 U.S. at 225-26 (internal quotation omitted, citation omitted).

Steps (i)-(ii) recite rate-setting/transmitting activities between the trading system server and at least one trading client system. This constitutes merely sending and receiving information. However, "[t]hat a computer receives and sends the information over a network—with no further specification—is not even arguably inventive." *buySAFE, Inc. v. Google, Inc.*, 765 F.3d 1350, 1355 (Fed. Cir. 2014). Moreover, the recited elements of the "current exchanges rates"—i.e. bid and offer prices—were standard parts of foreign exchange quotes that were routinely performed by conventional electronic trading systems, as described in the specification. '336 Patent at 3:32-63, 5:48-60 (acknowledging use of "standard" servers and databases for communicating and storing data). Steps (i)-(ii) thus do not provide an inventive concept.

Displaying received prices at a trading client system as recited in step (iii) also does not provide an inventive concept. Displaying price information is not an inventive concept. *See*

Trading Techs., 921 F.3d at 1093 ("As a general rule, the collection, organization, and display of two sets of information on a generic display device is abstract.") (quotations and citations omitted); *id.* at 1094 ("[S]imply displaying all the bids and offers in the aggregate, including the user's bids and offers, is not enough."); *OIP Techs., Inc. v. Amazon.com, Inc.*, 788 F.3d 1359, 1363-64 (Fed. Cir. 2015) (presenting offer to customers not a meaningful limitation of the abstract idea). Moreover, even though the specification never describes a "trading client system"—only an end user interface to the trading system which it refers to as a "Trading Station," the specification acknowledges that this "end user interface to the Trading System is a Web page that can be displayed on any ***standard*** Java-enabled browser." '336 Patent at 3:55-57 (emphasis added); *see also id.* at 10:30-54 (noting that a key feature of the "Trading Station" is that "it runs on any of the popular Web browsers connected to the Internet"). Accordingly, step (iii) does not provide an inventive concept.

Nor does step (iv), which describes the input of orders at the "trading client system." There is nothing technically special about receiving an order. *See Trading Techs.* 921 F.3d at 1093-94 (affirming patent-ineligibility of method claim which comprised the steps of "receiving a user input indicating a desired price for an order to be placed by the user" and "sending the order for the default quantity at the desired price to the electronic exchange"); *In re Villena*, 745 F. App'x 374, 376-77 (Fed. Cir. 2018) (affirming patent-ineligibility of system claim reciting "basic steps of receiving user input, producing property valuations, and providing display information"). Moreover, as just mentioned, the "trading client system" is not a specialized computer but is an "end user interface to the Trading System [that] is a Web page that can be displayed on any standard Java-enabled browser." Thus, the user input recited in step (iv) fails to provide an inventive concept.

Step (v)—"transmitting the accepted input from the trading client system to the trading system server"—fares no better. A computer that "receives and sends the information over a network—with no further specification—is not even arguably inventive." *buySAFE*, 765 F.3d at 1355; *see also Trading Techs.*, 921 F.3d at 1093-94 (affirming patent-ineligibility of method

claim which comprised the steps of "receiving a user input indicating a desired price for an order to be placed by the user" and "sending the order for the default quantity at the desired price to the electronic exchange"). Thus, step (v), which merely describes a conventional communication from a trader to a server which would be part of any order-driven trading system, does not provide an inventive concept.

Step (vi) describes determining whether to execute the client's order based on a comparison of the requested trade price with the current buy/sell prices. Comparison of financial information, however, is not a sufficient inventive concept. *Bozeman*, 955 F.3d at 976-80 (holding patent-ineligible claims involving comparison of financial records). Moreover, as step (vi) is the abstract idea of automatically executing based on a user-specified parameter, step (vi) must recite "significantly more" in order to provide the inventive concept. *Alice*, 573 U.S. at 217-18 (stating that inventive concept requirement is "to ensure that the patent in practice amounts to significantly more than a patent upon the [ineligible concept] itself"); *see also DDR Holdings*, 773 F.3d at 1256 ("Although many of the claims recited various computer hardware elements, these claims in substance were directed to nothing more than the performance of an abstract business practice on the Internet or using a conventional computer. Such claims are not patent-eligible."). It does not. Accordingly, step (vi) does not provide an inventive concept.

Step (vii) describes notifying the trader whether the requested transaction was executed, and at what price. General data communication, however, does not provide an inventive concept. *See buySAFE*, 765 F.3d at 1355 ("That a computer receives and sends the information over a network—with no further specification—is not even arguably inventive."). Moreover, such notifications as described in step (vii) were conventional in virtually every trading context, as traders must of course be informed that a trade has been accepted (and the price). *See* 17 C.F.R. §240.10b-10 (trade notification legally required in analogous trading contexts). Step (vii) thus does not provide an inventive concept.

Federal Circuit precedent confirms that these method steps do not suffice to provide an inventive concept. In *Trading Technologies*, the Federal Circuit affirmed the PTAB's decision

that a "method of operation used by a computer for displaying transactional information and facilitating trading" that required "receiving bid and offer information," "displaying" bid and offer indicators associated with the information, "receiving a user input indicating a default quantity," "receiving" a selection of a price along the price axis, and "sending" the order was patent-ineligible. 921 F.3d at 1093-94.

Finally, no inventive concept emerges from the ordered combination of these steps. As in *Alice*, "the claims at issue amount to 'nothing significantly more' than an instruction to apply the abstract idea…using some unspecified, generic computer," which is not enough to transform the abstract idea into a patent-eligible application. 573 U.S. at 225-26 (quoting *Mayo*, 566 U.S. at 79); *see also Trading Techs.*, 921 F.3d at 1094 (affirming that elements, both individually and as an ordered combination, do not recite an inventive concept); *In re Villena*, 745 F. App'x at 376-77 (finding that inventive concept did not arise from ordered combination of "basic steps of receiving user input, producing property valuations, and providing display information").

b. Independent Claim 7

Independent claim 7 provides even fewer specifics about how the computer performs the abstract idea than claim 1. Claim 7 only has five steps, and steps (i)-(ii) and (iv)-(v) of claim 7 are identical to steps (i)-(ii) and (vi)-(vii) of claim 1. Step (iii)—the only unique limitation of claim 7—describes receiving user input with slightly different wording than in step (iv) of claim 1. *See supra* § II.A, n. 2 (comparing limitations). Accordingly, the previous discussion of claim 1 demonstrates why all of the elements of claim 7 do not provide an inventive concept.

c. Dependent Claims 2-6

Dependent claims 2-6 simply recite minor variations of how the abstract idea of claim 1 is implemented by modifying how a user inputs an order and how that input is used to derive the user's requested trade price. Because none of these claims require any additional non-generic computer components or capabilities, they too implement the abstract idea through generic computer functionality. Accordingly, these claims also fail to provide an inventive concept.

In sum, all claims of the '311 patent are invalid under §101.

2. None of the Claims of the '336 Patent Include an Inventive Concept

All claims of the '336 Patent also do not contain sufficient inventive concept to transform their respective abstract ideas.

a. Base Elements Do Not Provide an Inventive Concept

As discussed *supra* § II.B, each claim of the '336 Patent contains five "base elements": (a) "server front-end in communication with said computer network"; (b) "a database"; (c) "a transaction server in communication with said server front-end and with said database; (d) "a rate server in communication with said server front-end"; and (e) "a pricing engine in communication with said rate server." These "base elements," however, are nothing more than generic computer and network components.

The specification describes the server front-end as "encapsulat[ing] ***a standard*** Web server (a la Apache)" ('336 Patent at 7:3-8 (emphasis added)), and the database as "preferably a ***standard commercially available*** SQL database…." *Id.* at 6:24-34 (emphasis added). For the remaining three "base elements"—the transaction server, the rate server, and the pricing engine—the only technical characteristic that the specification describes is that, by being one component of the Trading System server, each "preferably runs exclusively on Unix platforms" which is a brand-name computer platform. *See id.* at 6:20-23. Thus, these elements too are mere common computer components. The specification alternatively describes each in terms of its functionality in trading. *See supra* § II.B. For example, the transaction server "encapsulates all transaction functionality," the rate server "obtains currency exchange rate information from a variety of external rate sources and stores it locally," and the pricing engine "computes the currency exchange rates that the traders see and that are used for trading." *Id.* at 7:14-51. Thus, there is no technological invention described.

In addition, the Supreme Court and Federal Circuit have held that components similar to these "base elements" were insufficient inventive concepts. With respect to the "server front-end in communication with said computer network," the Supreme Court in *Alice* deemed a similar component "communications controller" as "purely functional and generic" and thus not sufficient to provide an inventive concept. 573 U.S. at 226-27. Moreover, that the server front-end is in communication with a computer network cannot provide an inventive concept. *See buySAFE*, 765 F.3d at 1355 ("That a computer receives and sends the information over a network—with no further specification—is not even arguably inventive."). With respect to the "database," the Supreme Court in *Alice* held that a similar element, "data storage unit," did not provide an inventive concept. 573 U.S. at 226-27. Likewise, *Trading Technologies* held that the method steps with functionalities similar to those of the transaction server, rate server, and pricing engine here were insufficient to provide an inventive concept. 921 F.3d at 1093-94 (holding that method claim 1 of U.S. 7,533,056, which recited in part, displaying bid and ask prices, receiving user input to send a trade order, and sending the trade order to the electronic exchange lacked inventive concept).[11]

Accordingly, none of the "base elements" provides an inventive concept.

b. None of the Additional Elements Recited in Each Claim Provide an Inventive Concept

The same is true of the additional elements: the specification either acknowledges that the recited functionality is well-known or fails to recite any specialized computer. With respect to claims 1, 5, 6, and 7, the specification acknowledges that the functionality performed by the

[11] In addition, these steps of displaying prices, receiving user input for a trade, and then transacting that trade ('336 Patent at 1:19-35), cannot provide any inventive concept because the patent specification describes each as steps in the prior art "three-way handshake" that the alleged invention was supposedly improving upon.

recited components can all be done using known formulas or methods. '336 Patent at 7:52-8:39 (acknowledging that calculating the interest rates recited in claim 1 "on a tick-by-tick basis" merely involves a routine application of a well-known interest formula); *id.* at 7:24-25 (acknowledging that "[v]arious methods of calculating such [interest] rates [as recited in claims 5 and 6] are known to those skilled in the art."); *id.* at 9:23-25 (noting that that "[v]arious methods of performing such [hedging] calculations [as recited in claim 7] are known to those skilled in the art."). With respect to claims 8-10, the '174 Provisional Application acknowledges computing currency exchange rates using positions based on one or more trading models is not new. D.I. 59-3, at 333 (noting the application of evolutionary algorithms to exchange rates) (citing to Oussaidène, *et al.* (1997)). Indeed, the '174 Provisional Application discusses numerous trading models from the previous decade. *Id.* at 316-318.

With respect to claims 2-4 and 11, the specification only describes the additional elements by their functionality. "Vague, functional descriptions," however, "are insufficient to transform the abstract idea into a patent-eligible invention." *In re TLI Commc'ns LLC Patent Litig.*, 823 F.3d 607, 615 (Fed. Cir. 2016) (holding that where the "specification limits its discussion of the components to abstract functional descriptions devoid of technical explanation as to how to implement the invention," such components failed to provide an inventive concept). The specification describes the "trade manager" recited in claims 2-4, based on its "subcomponents: (a) a stop-loss daemon . . .; (b) a take-profit daemon . . .; and (c) a limit-order daemon . . ." *See* '336 Patent at 8:40-53. The specification then describes each daemon by its functionality. *Id.* at 8:54-61 (describing the daemons as "continuously monitor[ing] the current rates to determine whether action is required," "cach[ing] in memory all of the orders that it may need to execute," and "keep[ing] the orders suitably sorted so that they can take fast action when

necessary"). Accordingly, the "trade manager" is another generic, functionally defined computer module. With respect to claim 11, the specification describes the "Margin Control Manager" in terms of its functionality. Specifically, the "Margin Control Manager" "continuously monitors the margin requirements of all trader accounts," and "[w]hen necessary . . . liquidate[s] some (or all) of a trader's holdings." *Id.* at 8:62-9:2. The "margin control manager" thus is also a generic, functionally defined computer module. Moreover, as components of the Trading System server, both the "trade manager" and the "margin control manager" "preferably run[] exclusively on Unix platforms" like the other "base elements." *See id.* at 6:20-23.

Accordingly, none of the additional elements provide an inventive concept.

c. There Is No Claimed Ordered Combination That Can Provide an Inventive Concept

None of the claims of the Asserted Patents requires a specific ordered combination of steps or elements. Instead, the elements are generally "in communication" with other elements in a way that reflects standard (and unspecified) communications between computer modules utilized in trading functions. Even considering the functional descriptions of the claimed elements, there is no specific order to the functionality being described; rather, there is the non-inventive process of receiving the data or inputs before taking action based upon such information. Thus, there is no special inventive order of steps that can save these claims. And, as in *Alice*, "the claims at issue amount to 'nothing significantly more' than an instruction to apply the abstract idea…using some unspecified, generic computer," which is not enough to transform the abstract idea into a patent-eligible application. 573 U.S. at 225-26 (quoting *Mayo*, 566 U.S. at 79).

C. The Court Should Not Accept OANDA's Conclusory and Boilerplate Allegations That Contradict the Intrinsic Evidence

GAIN anticipates that OANDA will argue that the Court should ignore such analysis of

the claims and intrinsic evidence in favor of accepting its allegations in the FAC as true. However, a district court need not accept conclusory and boilerplate statements to support the question of patentable-subject matter. *See Ipa Techs, Inc. v. Amazon.com, Inc.*, 352 F. Supp. 3d 335, 349 (D. Del. 2019) (finding that "[t]he majority of Plaintiffs new . . . allegations d[id] not alter the *Alice* Step Two analysis" because the court was "not required to treat boilerplate allegations that the claims are directed to new computer functionality and improvements to technological processes as true where those allegations contradict the language of the claims and specification."); *see also Consumer 2.0, Inc. v. Tenant Turner, Inc.*, No. 18cv355, 2019 U.S. Dist. LEXIS 231314, *20-21 (E.D. Va. Apr. 4, 2019) ("unpersuaded" by Plaintiffs' arguments which were based on newly-inserted paragraphs, many of which were conclusory and boilerplate); *Synopsys, Inc. v. Avatar Integrated Sys., Inc.*, No. 20-cv-04151, 2020 U.S. Dist. LEXIS 212877, at *12 (N.D. Cal. Nov. 12, 2020) (same). Here, that is all that OANDA provides in its FAC and such conclusory and boilerplate statements should be rejected.[12]

The FAC recites numerous boilerplate and conclusory paragraphs related to the question of whether the patents are invalid for patent ineligible subject matter. For example, paragraphs 28 and 48 allege that the claims of the '336 Patent and the '311 Patent, respectively, "are not directed to an abstract idea or concept. Rather, they are directed to specific implementations of computerized trading systems and interfaces for trading currencies." FAC, ¶¶28, 48. Similarly, paragraphs 29 and 49 conclusorily allege that each of the claims of the '336 Patent and the '311 Patent, respectively, "is inventive over the prior art. . . . Specifically, the claims are non-abstract and embody an inventive concept at least because their claimed elements, combinations of elements, and the interactions between those elements was not well-understood, routine, and

[12] Allen Declaration at ¶ 8 provides a side-by-side comparison of the separate allegations discussed herein related to the patent-ineligible subject matter inquiry for each patent. Tellingly, OANDA's allegations as to one patent are identical or almost identical as to the other patent in most places thus contradicting OANDA's assertion that it has two different inventive concepts.

conventional at the time of the application." *Id.*, ¶¶29, 49. Paragraphs 42 and 60 do the same. *Id.*, ¶¶42, 60 ("Regarding each of the independent claims, it was further not well understood, routine, and conventional to combine the elements of said independent claims with the elements of their respective allowed dependent claims."). So too with paragraphs 31 and 51, 35 and 53, 36 and 54, 41 and 59. Each of these paragraph couplets are conclusory and boilerplate, drafted in an attempt to avoid the question of patentable subject matter at the pleadings stage. Even the allegations that specifically talk about the individual claims of the patents, *(see* FAC ¶¶32, 52, 33-34, 37-40, 55-58), are boilerplate or conclusorily allege that the limitations of the claims are a technological improvement, requirement, or limitation; focusing on the abstract idea or the result and not on the actual components recited in the claims.

Many of the allegations mentioned above are either conclusory legal allegations that simply mirror the *Alice* requirements, are untethered to the claim language, or if not untethered to the claims (*see, e.g.*, ¶¶40, 58), do not plausibly establish how the claims add an inventive concept. The remaining allegations simply allege that the abstract ideas are the inventive concepts. Such is fatal to OANDA's FAC. *SAP Am.*, 898 F.3d at 1169 (stating that "judgment on the pleadings that the claims recite no 'inventive concept' is proper" where claim details are either themselves abstract or there are no factual allegations from which one could plausibly infer that they are inventive).

OANDA may also argue that the claims are inventive because they improve on the prior art three-way handshake. If so, such an argument is a red herring, because whether the "techniques claimed are '[g]roundbreaking, innovative, or even brilliant,' …is not enough for eligibility." *Id.* at 1163. Even assuming that such was a proper inquiry, the allegedly novel two-way handshake which solves the problem of the three-way handshake is not a technical solution

but a logical solution,[13] and thus still is a patent-ineligible abstract idea. *See Synopsys, Inc. v. Mentor Graphics Corp.*, 839 F.3d 1138, 1151 (Fed. Cir. 2016) ("[A] claim for a new abstract idea is still an abstract idea.") (emphasis omitted).

V. CONCLUSION

GAIN respectfully requests that the Court grant its motion for judgment on the pleadings and dismiss all counts of the FAC because the Asserted Patents claim patent-ineligible subject matter; and are thus invalid. Because the §101 analysis focuses on the claims, no allegations can overcome the claims' lack of technological elements that would transform the abstract ideas into patent-eligible subject matter; and thus dismissal with prejudice is proper.

[13] The PTAB agreed that the allegedly novel Market Order with Requested Price did not constitute a technological feature. Ex. 5 at 15-16 ("[The] 'Market Order with Requested Price' (MORP)[] involves two communications (rather than three, as in the prior art) where the 'trader specifies a price based on real-time price information and [] the system executes the order immediately and at that requested price.' Even assuming that the type of trading order described by Patent Owner is novel and unobvious over the prior art, however, we do not see why it would constitute a 'technological feature,' and Patent Owner has pointed us to no novel technical components in the claim constituting an unobvious system architecture that would carry out such a trading order. Claim 1 recites a method, not a 'system architecture' as Patent Owner contends. And the only technical components in the claim are the generically recited 'trading system server' and 'trading client system.'") (citations omitted).

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